

REMARKS

Entry of this amendment is respectfully requested.

The objection to claims 128 and 129 is traversed, as these are product by process claims, and are legitimate under U.S. practice. Thus, withdrawal of this objection is respectfully requested.

The objection to claim 137 is not believed to apply to the presently pending claims.

The objection to claim 138 is not believed to be proper because claim 138 refers to d_{80} and not d_{50} . Withdrawal is respectfully requested.

The 35 U.S.C. §112, first paragraph, rejection is not believed to apply to the new claims.

Claims 104-117, 119-134 and 136-140 were rejected under 35 U.S.C. §103(a) over Leon in view of Tsuneta and Matsuda. Applicants respectfully traverse.

Leon discloses compositions and a method of forming a corrosion protective coating on a metal substrate and a such coated article, whereby a portion of the zinc particles in the conventional zinc-rich coating compositions with a comminuted refractory ferro alloy (col. 2, lines 21-25). A binder is contained in an amount of 3 to 70 %w (col. 2, lines 34-38). The binder may contain synthetic resins, e.g., epoxies as well as inorganic binders, e.g., phosphates. (col. 2, lines 42-49).

A filler is contained in an amount of 20 to 95 %w (col. 2, lines 57-69), which is a mixture of metal particles more anodic than the metal of the substrate to be protected as well as comminuted particles of a refractory ferro alloy (col. 3, lines 4ff).

At least 3 %w of the filler portion are comminuted ferro alloy, and preferably 10 to 35 %w of the filler portion (col. 3, lines 8ff). The ferro alloys may have a particle size of 2 to 10 μm .

The metal particles like zinc particles may have a particle size of 2 to 10 μm .

The composition may also contain solvents (5-60 %w – col. 4, line 63), curing agents, plasticizers and other disclosed contents.

The dry coatings preferably have a thickness of 12.7 – 127 μm (col. 5, line 3). The dry coating may contain 3 to 70 %w of binder and 30 to 97 %w of filler (col. 5, lines 7-11).

The coating properties of the examples reached a corrosion resistance over four days in 1 % NaCl solution for the best of the coated steel panels without any rust, even in score lines.

In col. 7, lines 47-58, it is indicated to exchange the ferro alloy particles by similar refractory materials' particles like tin phosphide and tungsten phosphide, but not alloys of tin or tungsten.

Tsuneta discloses a method for imparting corrosion resistance and cationic electrodeposition coating properties to a steel plate by coating the metallic surface with a composition comprising 100 parts by weight of certain epoxy resins and 5 to 400 parts by weight of colloidal silica (See, e.g., claim 1). The description and the claims are primarily directed to the organic constituents. According to claim 8, 0.1 to 30 parts by weight of graphite < 1 μm per 100 parts of epoxy resin may be contained to improve the weldability (col. 4,1. 58/59). To improve the conductivity, a further powder like Sn or Sn alloy may be employed, but these two are mentioned together with 38 other mentioned powders (col. 5, lines 19-43). These powders show negative properties, such as to be likely to form white rust, lead to corrosion problems, have a high specific gravity, show stability problems due to precipitation and coagulation, tend to protrude from the coating layer and have problems with processability, whereas graphite particles do not exhibit such problems. In the comparative examples, no further powder like Sn or Sn alloy is added.

Therefore, nobody would select Sn or Sn alloy particles for such weldable coating compositions.

Matsuda discloses a weldable paint composition comprising a film forming resin and a conductive mixture of soft metal of Al, Zn, Pb, Cu, Cd, Mg, Ag, Sn and their alloys as well as of hard metal of Fe, Ni, Co, Cr, Mn and their alloys in the ratio 1:4 to 4:1. The particle size is finer than 200 mesh (75 microns). This mixture should be non-conductive until a pressure of 30 kg/cm² by press forming and welding (See, e.g., claim 1).

The dry paint film shall have a film thickness of 8 to 20 microns (claim 2). Graphite may also be contained (col. 1, last line).

In col. 2, line 22, aluminum paste and zinc powder are mentioned as soft constituents; comparison tests were made with aluminum paste only (col. 2, lines 46ff). In the examples, Al, Zn or Pb powder was used together with Fe powder.

There is no indication, however, of how a powder of Sn or Sn alloy would behave.

In view of the foregoing, withdrawal of this rejection is respectfully requested.

Claims 104-140 were rejected under 35 U.S.C. §102(e) over Reising in view of Tsuneta or Matsuda. Applicants respectfully traverse.

The Examiner cites to 35 U.S.C. §102(e), which is an anticipation statute, but concludes with an obviousness rejection based on the combination of references (see page 9 of the office action, second paragraph. This is confusing, and the rejection should be clarified so that applicants can properly respond.

Furthermore, Reising discloses protects a method of coating a substrate with 1) a conductive weldable coating composition and then 2.) with a powder paint coating composition with a flake pigment which composition has to be molten to coalesce and crosslink (See, e.g.,

claim 1). In col. 2, lines 36-40, it is disclosed that a content of electrically conductive pigments as well as of anticorrosive pigments is required.

In col. 5, lines 43-61, Zn, Fe₂P, Al, Fe, graphite, Ni, W and mixtures thereof are mentioned as suitable pigments. The average particle size should be less than 10 µm, preferably in the range of 1 to 5 µm. Their content is 10 to 60 volume % of the total volume of pigment and binder. There is no hint or suggestion to use Sn or Sn alloy powders.

Thus, this rejection must be withdrawn.

Claims 104-108, 112, 116, 134 and 136 were provisionally rejected under the ground of obviousness-type double patenting over certain claims of USSN 10/511,242.

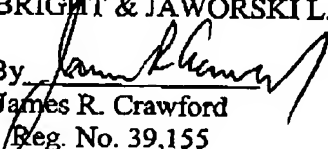
Applicants will attend to this rejection, should it be applied to the presently pending claims, upon the indication of allowable subject matter.

In view of the foregoing, all rejections are believed to be overcome. Allowance is respectfully requested.

The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-0624, under Order No. NY-DNAG-293-US.

Respectfully submitted

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